



# **STREAM ECOLOGY & RESTORATION WORKSHOP**

## **August 19<sup>th</sup>, 2004**

### **Clifford Branch – City of Frederick Municipal Forest Frederick Co.**

- 9:00**    **Volunteers arrive at Hodson Science Bldg. First Floor, Hood College; Frederick, MD**  
**Stream Macroinvertebrates Make and Take**
- 9:30**    **Overview of the Day**
- 9:35**    **Stream Ecology & Macroinvertebrate Community**  
*by Rita Bruckler, Resource Assessment Service, MD-DNR*  
Overview of stream morphology and the macroinvertebrate community found in a piedmont stream. Exercises will help participants learn to identify stream organisms and how they and riparian features impact water quality.
- 10:20**    **Video of 'Maryland Streams – An Undiscovered Realm'**  
General overview of Maryland streams and human impacts on streams.
- 10:50**    **Break**
- 11:00**    **Riparian Buffers and Streams**  
*by Matthew Chasse, Watershed Services, MD-DNR*  
Overview of riparian buffers and how they influence streams. Review basic plant ID techniques and practice with both native and invasive species.
- 11:45**    **Overview of TEAM DNR Streams Programs**  
*by Matthew Chasse, Watershed Services, MD-DNR*  
Learn about the progression of the TEAM streams programs and how they all fit together.
- 12:05**    **Lunch & Finish Stream Macroinvertebrate Make and Take**
- 12:30**    **Leave for Clifford Branch**
- 12:45**    **Arrive at Clifford Branch**  
**Stream Sampling & TEAM Sampling Activities**  
*Led by Rita Bruckler and Matthew Chasse*
- Review of stream sampling equipment
  - First look at Stream
  - Identify stream habitats for macroinvertebrates.
  - As a group, sample the stream for macroinvertebrates using D-net sampling techniques. Collected specimens are identified and recorded.
  - In smaller groups, sample stream for macroinvertebrates, identify samples, and record data
  - Discuss Results
- 1:45**    **Vegetation Plots and TEAM Vegetation Sampling Activities**  
*Led by Matthew Chasse and Rita Bruckler*
- Review of vegetation sampling equipment.
  - Finding and marking a vegetation sampling plot.
  - Identify Vegetation and canopy structure and record data
  - Discuss Results
- 2:30**    **Stream Water Quality Sampling and TEAM Sampling Activities**  
*Led by Rita Bruckler and Matthew Chasse*

- Review of stream water quality sampling equipment
- Sample the stream water quality and record data
- Discuss results and compare to macroinvertebrate data

### 3:00 Opportunities for Stream Restoration

*Led by Matthew Chasse*

- Review of stream data and look at opportunities for restoration activity.
- Restoration activities are Tree Planting or Invasive Species Removal
- Discuss the basics of a Restoration Project
- Review materials needed for a restoration

### 3:30 Workshop Ends

***Volunteers should be prepared to get wet in a stream. If you have hip waders or waterproof boots bring them. You should also bring bag lunches.***

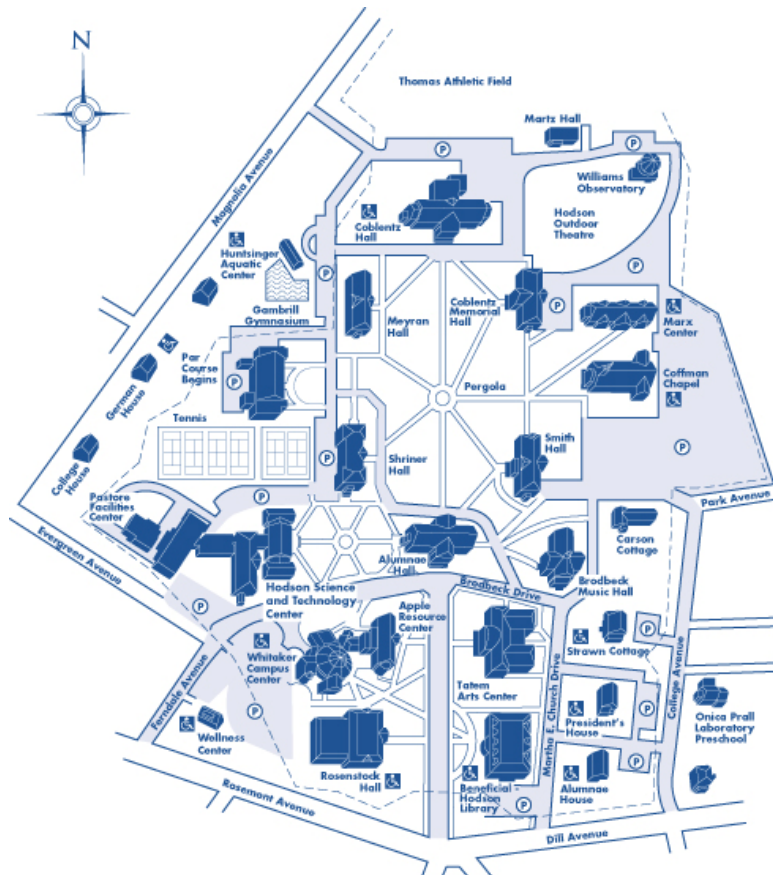
## Directions to Hood College

From Points North: Follow U.S. 15 south from Gettysburg and points north to Frederick. Take Rosemont Avenue exit. Turn right onto Rosemont Avenue. Travel less than one-half mile and turn left onto Magnolia then a right onto Evergreen.

From Points West: Follow I-70 east from Hagerstown and points west. Take first Frederick exit onto U.S. 40. Follow U.S. 40 east to U.S. 15 north to Rosemont Avenue. Turn left onto Rosemont Ave. Travel less than one-half mile and turn left onto Magnolia then a right onto Evergreen.

From Washington: Follow I-270 northwest from Washington, D.C., toward Frederick and Gettysburg. Avoid turning to I-70. I-270 ends and the highway becomes U.S. 15 North. Follow U.S. 15 north to Rosemont Avenue. Turn left onto Rosemont Ave. Travel less than one-half mile and turn left onto Magnolia then a right onto Evergreen.

From Baltimore: Follow I-70 west from Baltimore to junction with U.S. 15 North (Exit 53). Follow U.S. 15 north to Rosemont Avenue exit. Turn left onto Rosemont Avenue. Travel less than one-half mile and turn left onto Magnolia then a right onto Evergreen.



Park on street or directly ahead at Whitaker Campus Center. Hodson Science and Technology Center is the one with the attached greenhouse. Workshop meets on the first floor near lobby.